HT-Shaver BD Harvester

User Manual

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HT-Shaver BD Harvester

Introduction

Congratulations on the purchase of your *Harvester Concepts Ltd HT—Shaver Harvester.* This machine is of high quality and will reward you with reduced effort and greater efficiency in your harvesting.

Learning to operate your *HT—Shaver* won't take long. You will soon find it to be an invaluable tool.

Important Safety Note

Read and understand all the instructions before using the *HT-Shaver*

- The HT– Shaver should only be used for the purposes for which it was designed. Use it for no other purpose (e.g. it is not a grader blade or battering ram!). We have manufactured the HT-Shaver using quality materials and manufacturing techniques however if faults do occur please have them corrected before you use it.
- Please read the Power Head instruction book before use. Pay particular attention to running in and safety notes.
- Please read this instruction book before use and retain it for future reference.
- It requires only one person to operate the HT-Shaver - keep all others away!
- Immediately after turning the power head off, fit the cutter bar cover. It should be removed last, before restarting the power head.

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Specifications

Cutting height above bed: 10 to 80mm

Cut width:- 1200mm

Weight, dry:- 42 Kg

Wheel track:- 1415mm centre lines

Dimensions:-

Ready to use:- width 1600mm

Length 2330mm

For Freighting:- On pallet

Approx 80 Kg

(inside 1750x1600x600) approx 2m³ Overall

Specifications subject to change without notice

Conditions of Sale and Guarantee

Your *HARVESTER CONCEPTS LTD* product is guaranteed to be free from defects in materials and/or workmanship under normal use and service for a period of 6 months from date of initial purchase.

HARVESTER CONCEPTS LTD'S liability and obligation is limited to problems which *HARVESTER CONCEPTS LTD* acknowledges to be defective under the guarantee conditions either to

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- or shipment of replacement parts to the customer, as mutually agreed to.

Supply of non standard parts or services from other than *HARVESTER CONCEPTS LTD* are not covered under the guarantee conditions unless prearranged, in writing, with *HARVESTER CONCEPTS LTD* .

Shipment of product to *HARVESTER CONCEPTS LTD* is the consumers responsibility and cost Guarantee conditions are void for any of the following reasons:-

Abnormal use of the product
Accident damage or vandalism
Modifications or unauthorised repairs to the product or its components
Where component "seconds" have been supplied
Normal wear and tear

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Your HT-Shaver Harvester Consists Of:-

- Handlebar frame (c/w 4 x bolts and washers)
- Safety bar (mounted)
- Conveyor and cutting head assembly
- Two wheel assemblies c/w mount legs
- HT– Shaver-BD instruction book
- Power Head instruction book and spanners
- Set, oil change equipment

Optional

- Bins (Recrate 47 or 75)
- Self propelled
- 24VDC powered / self propelled

23			Housing front
24	HT-SH-ED032A	2	Drive Plate
25			Spacer 25x15x6.05
26	6002LLU	2	Bearing
27			Spacer 22x15x2
28			Gear, Intermediate 76T
29			Gear, Driven 70T
30			Key 4 mmx25
31			Output shaft
32			Key 4mm x20
33		2	Eccentric
34	HT-SH-ED020	2	Bearing Block
35	HK4012		Bearing Needle roller
36		1	SHCS M6 x 20 CSK
37			Collar
38			CHCS M8x35 ZP
39			Cover
40			Blade extension Bottom
41			Blade Extension Top
42			SHCS CSK ZP M6 x 16
43			Dowel 10 dia x 45
44		1	Wear Strip, upper
45		2	Wear strip, lower
50	HT-SH-Cables		Throttle cable
51	-SS		Safety Switch
52			Conveyor belt

Uses of the HT—Shaver

The HT-Shaver BD (Bottom Drive) is designed for cutting close to the ground. It's ground following roller allows accurate height adjustment. There are other specific models for flat or raised beds, manual or self propelled. There is also an all electric model, 24VDC, for use in tunnel houses. Uses include:-

- **Herb Harvesting**. the HT will ride on the row to be harvested, cutting the crop to a uniform height and placing the trimmings in the collection bins
- **General Trimming**. Pruning crops to a low height
- **Clean Up.** Cutting and collecting up surplus or old crops before reusing the seed beds

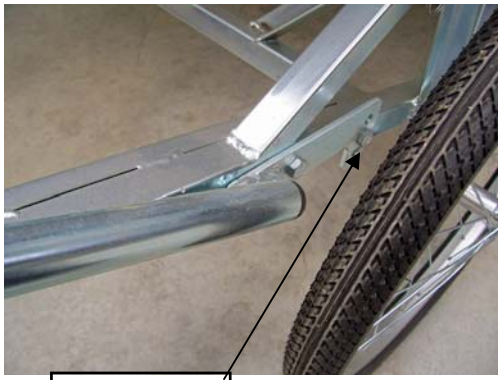
Assembly

- Unpack the harvester ensuring you receive all the parts and that they have not been damaged in transit.
- Layout the components on the ground in their rough position.
- The wheels may already be fitted to the mounting legs, as shown on page 7 set cutting height to maximum. Lift rear of harvester and insert each wheel / leg assembly into its retainer. Insert retainer pin for required conveyor / bin height
- Fit the handlebars: Fit the rear bolts first then select handle bar height, align relevant holes and insert front bolts Adjust your force on the handlebars to make screwing in the bolts easier.
- Fit collection bins—they slide / drop into the holders.

HT-Shaver-BD Parts List

Item No.	Part No.	Qty	Description
1	GX25	1	Engine GX25
2		1	Driveshaft Assy
3		1	Driveshaft inner
4			Worm Drive gearbox
4a			Bell Housing
5			Nut M10x1.25, thin
6			Clutch Drum
7			Housing Rear
8	6000LLU	3	Bearing
9			Input Gear 17T
10			Spacer 19x10x3 shouldered
11			Spacer 19x10x6
12		4	SHCS M6 x25
13		6	SHCS M6x20
14			Blade Lower
15			Blade Upper
16			Mounting Bolts/Nuts
17			Bolts Blade:SHCS button head M6x20 qty 1 M6x16 qty 11
18	0-096-206	10	Washers
19	0-133-205	10	Koma
20		10	Nut, M6 conelock
21	HT-SH-ED012		Backing strip
22		2	Mounting bolts

Height Adjustment



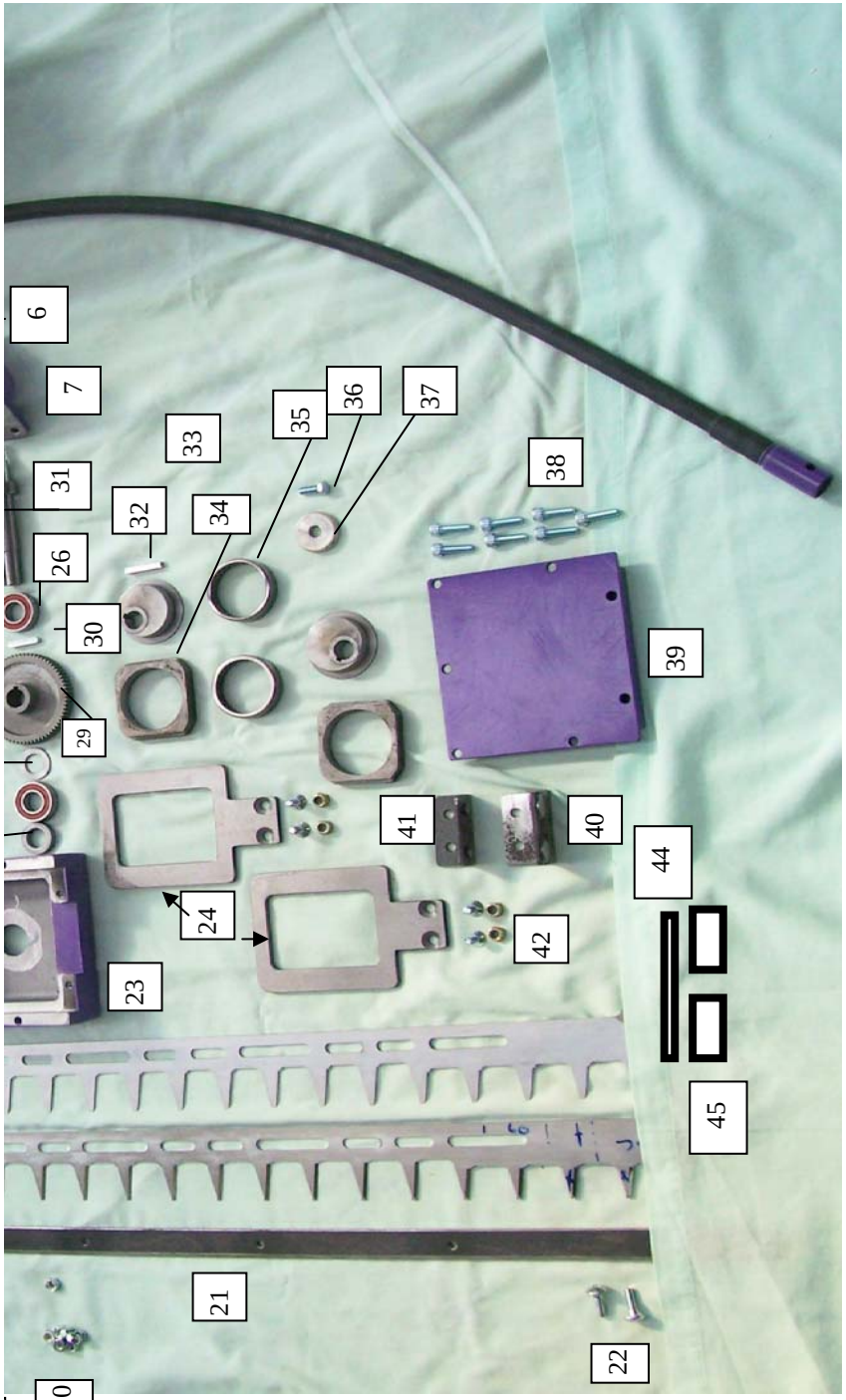
This is easiest done on a flat surface but can be done in the field.

1/.Ensure the wheels are set at the correct height so the bins clear any cut crop. Supporting the harvester weight, remove wheel mount lock pin, raise lower harvester to correct height and reinsert lock pin. Repeat for other wheel.

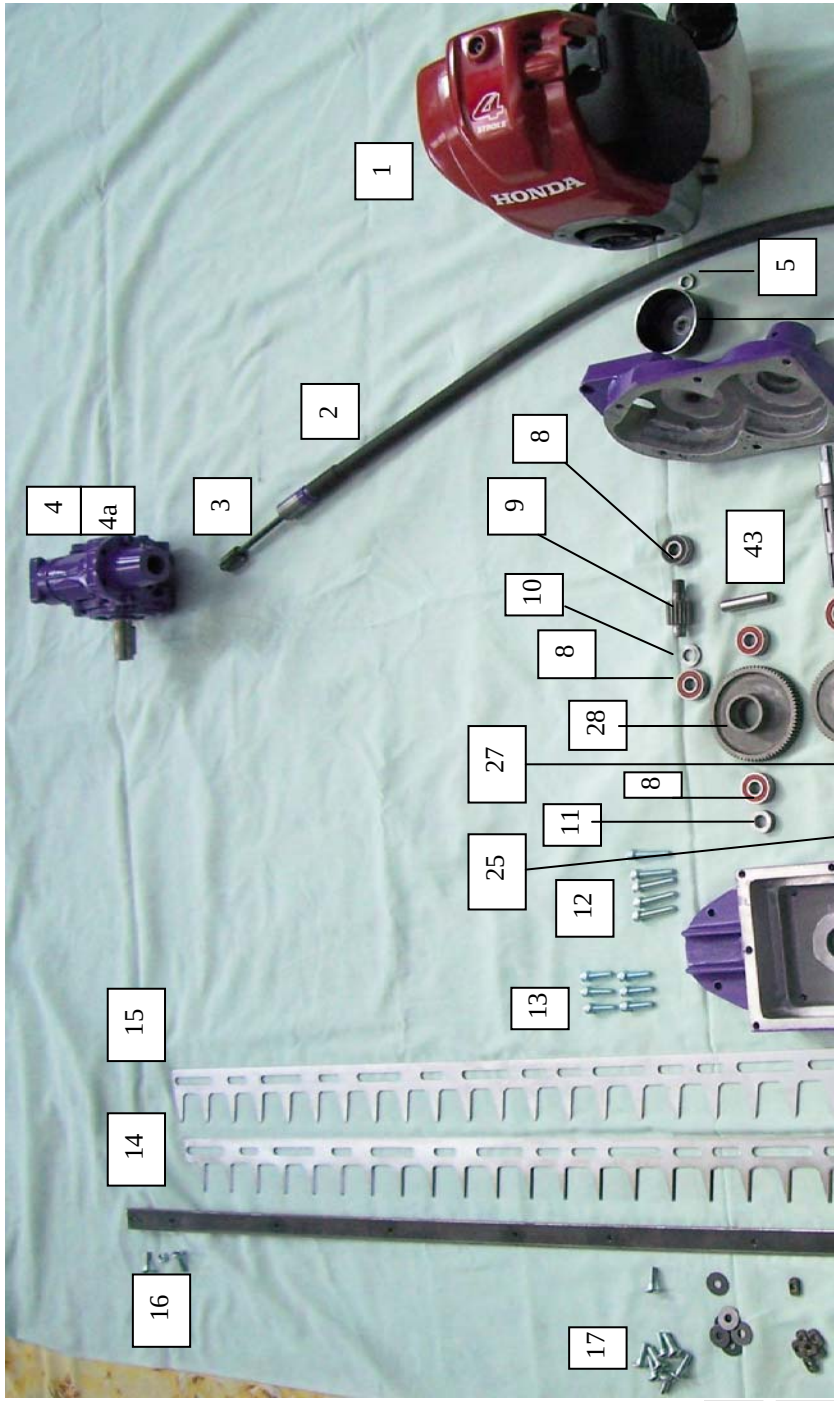
2/.Adjust handlebars for operator comfort; slacken rear 2 bolts, undo front 2 bolts and reposition handlebars. Reinsert front 2 bolts and tighten all bolts.

3/. **Cut height adjustment:** There is an adjuster on each side of the harvester. Remove lock pin on each side of harvester, far side first, engine side last (as it is the heaviest). Brace the harvester from moving back or forwards and move the big lever to obtain the correct cut height

Dismantling is in reverse of assembly.



HT-Shaver-BD Parts List



Adjusting lever; To cut lower

Low cut height

Lock pin

High Cut Height

Start Up

1. The power head should be refuelled and started in accordance with the manufacturers handbook. **Note:** Especially during running in , vary the throttle setting - don't rev continuously. Also note oil change requirement.

2. With the machine adjusted ready for harvesting, remove the cutter bar cover.

3. Ensure safety bar is in forward position and the engine stop switch is on before attempting to start the engine. **NOTE:- If the safety bar is moved rearward it will operate the switch and stop the engine and cutter bar.**

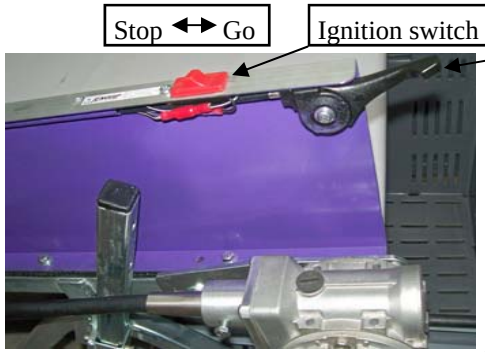
4. The engine must be stopped and the cutter bar cover fitted before any

5. Let the engine warm up for a minute. Use the throttle control to rev the engine up. As the engine is revved up the conveyor and cutter bar will start.

To stop the conveyor and cutter bar, throttle the engine back with the throttle lever. The engine stop switch is adjacent to the throttle. The Safety Bar switch will also stop the engine if activated

Fault Finding

Engine will not start - Refer to manufacturers handbook



adjustments are done.
CAUTION: Do not approach the front of the machine with the engine running. Always switch it off and fit the cutter bar cover.

- Check ignition switch is on and safety bar is in forward position
- Fuel in tank?
- Correct use of choke? Primed Carburettor? Fouled spark plug?

Conveyor not driving correctly

- Engine revving up?
- Conveyor belt too tight. It should only be tight enough to grip on the drive roller without slipping. Remember that there is a belt tensioner on each side of the machine. Both tensioner bolts must be adjusted evenly. To adjust—release lock nut / bolts and adjust tension bolt accordingly. Retighten lock nuts and lock bolts.

Options

Field Harvest Wheels

These smaller wheels are used when a solid field of crop needs harvesting—there are no rows for the wheels to travel down. The larger wheel axles are unbolted from the mounting legs and the smaller wheels / axles are fitted to them. When offering the wheel assemblies up to the main harvester frame, ensure the wheels are positioned underneath the harvester. This positions the wheels behind the cutter bar so they do not protrude onto un cut crop.

Large wheels should be used wherever possible as they travel over rough ground better. If required the left hand wheel can be a large one, positioned behind the engine and the right hand wheel can be a small one fitted under the harvester.

Annually

- Remove cutter blades: remove front of gearbox. Use an allen key in the central bolt to rotate / move blades so you can remove each attachment bolt (4). Next remove blade mounting bolts (10). Replace "Kuma" blade bushes as required. Coat blade mating surfaces with food grade grease and refit. Ensure to adjust bolt tension as shown on page 10
- Remove flexible drive inner cable, wipe clean, grease and reinstall ensuring full engagement into drive shafts and retaining bolts fit into cable retaining holes.

Freighting

Freighting on the back of a utility vehicle is preferred. The HT-Shaver is very light and if transporting on a trailer it is not heavy enough by itself to make the trailer springs work i.e. it will get badly shaken about. On rough road / tracks this could cause structural damage. One solution is to put an extra weight on the trailer as well as the harvester so the springs actually work!

Conveyor belt loads up / doesn't track correctly—it moves to one side. The belts can move to one side, load up or become stressed if not tensioned correctly

- uneven belt tension. Belt will always move towards the tight side—tighten it up (see above).
- Build up of material on rollers. The conveyor belt may have to be slackened or removed totally to remove any foreign material. See the maintenance section.

If you require further assistance or spare parts, please call
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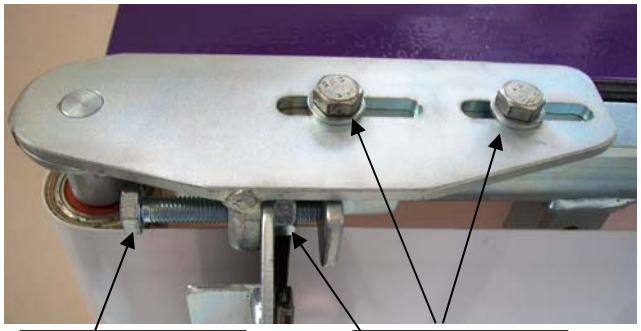


Maintenance

Daily

- **At every refuel** give each of the gearboxes 5 grease nipples 1 pump each from a grease gun (use food grade grease).
- The cutter bar should be lubricated with a food compatible lubricant whenever refuelling and before storing. Apply a little grease into each hole on top of the cutter bar—this is blade position sensitive so ensure grease is not passing straight through and onto the ground
- Food grade lubricants can be applied to hinge points, sliding areas etcetera. Wash down the HT-Shaver harvester after use. Only wash enough to remove dirt. Over washing could induce corrosion and reduce the conveyor belt life. Sealed bearings are utilised but water under pressure could penetrate them.

Weekly

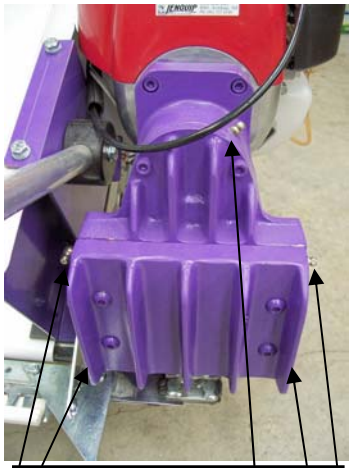
- Check the cutter blades for looseness. If necessary adjust as follows.

  Loosen nut (1)

  Tighten screw (2) and turn back 1/2-3/4 turn

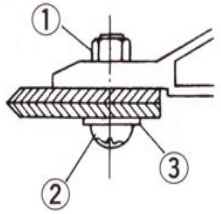
Tighten nut (1)

Lubricate blades, start engine and run blades for 1 minute at full speed. Stop the engine and carefully touch each bolt (2) in turn. If temperature moderate, clearance is good; too hot to touch - re-adjust turning (2) back a little and retest.



Grease Nipples (5)

- Apply a drop of oil to the throttle cable adjacent to the carburettor
- Sharpen the cutter bar if required. Always file in the direction of the cutting edge (and lift file off blade to return to start position). Remove as little
- material as possible. After all filing is complete, remove burrs from the edge of the blade with a slip stone.
- Apply dry lubricant / oil to all sliding areas

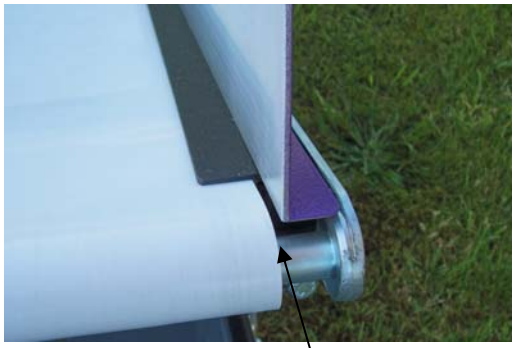


To clear contamination from around conveyor rollers you need to:-

- Slacken the drive chain tension. Slacken the conveyor belt. This is done at the 2 adjusters at the top end of the conveyor. Note their original setting so you can adjust back to this later. Slacken belt tensioners and remove belt (remove safety bar, right hand wheel assembly, RH conveyor fence and slide belt off RH side). Reassembly is the reverse procedure.
- Check conveyor belt alignment is correct. The gap on each side should be even. See page 9 for adjusting procedure.

50 Hour

- Drain and replace engine oil; Remove engine oil dipstick and fit extension tube and drain container supplied. With assistance tip the harvester up onto it's RH side ensuring the container is under the extension tube until all oil has drained out of the engine. Remove drain container and lower harvester back onto its wheels. Refill with 90cc of correct grade engine oil. Place drain container on the ground below the filler point. Remove extension tube, check oil level is correct and refit dip stick.



Gap

Dip Stick

Preventative Maintenance

You will become reliant on the harvester to do its job and if a breakdown was to occur you could find yourself in an awkward predicament. We recommend regular maintenance to help avoid breakdowns.